

ABSTRACT

[0034] ~~Device for connecting a longitudinal carrier (11) with a bone fixation means (1), specifically a pedicle screw comprising A) a connection element (5) with a coaxial cavity (8) penetrating the connection element (5) from the upper end (6) to the lower end (7), which is tapered towards its lower end (7) by means of at least one shoulder (9), and a channel (10) for receiving a longitudinal carrier (11) penetrating the connection element (5) perpendicular to the longitudinal axis (2); B) a sealing cap (12); and C) tensioning means (13), which can be connected to the rear end (19) of the sealing cap (12) and by means of which a longitudinal carrier (11) inserted in the channel (10) can be fixed in the connection element (5), D) latch in arresting means (21) complementary to each other are attached externally on the connection element (5) and in the second cavity (18) in the sealing cap (12), which devices serve for securing the sealing cap (12) to the connection element (5).~~ The present invention is directed to a device for connecting a longitudinal carrier, for example, a longitudinal spinal rod, to a bone fixation means, for example, a pedicle screw. The device includes a connection element having an upper end, a lower end, and a cavity extending from the upper end to the lower end, the cavity having a reduced diameter portion at the lower end thereof thereby forming a shoulder for engaging the head of the bone fixation means. The connection element further including a transverse channel for receiving the longitudinal carrier. The device further includes a sealing cap incorporating tensioning means for securing the longitudinal carrier within the transverse channel. The sealing cap being secured to the connection element by way of arresting means, wherein the arresting means preferably includes a plurality of bulges, i.e., projections, formed on the outer surface of the connection element and the sealing cap includes a plurality of complementary depressions, i.e., recesses. The device may further incorporate securing means in order to prevent the bone fixation means from passing through the upper end of the cavity once the bone fixation means has been introduced into the connection element.